

Outer Dowsing Offshore Wind

Report to Inform Appropriate Assessment Appendix 1: Screening Matrices

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Matrix 46: Fowlsheugh SPA	69
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Matrix 53: Pentland Firth Islands SPA	76
Matrix 54: Copinsay SPA	77
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Matrix 56: Calf of Eday SPA	79

Matrix 58: Rousay SPA	80
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Matrix 63: Sumburgh Head SPA	85
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Matrix 66: Fetlar SPA.....	88
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Acronyms & Definitions

Abbreviations / Acronyms

Abbreviation / Acronym	Description
EMF	Electromagnetic fields
HEA	Habitat Regulations Assessment
INNS	Invasive Non-Native Species
LSE	Likely Significant Effect
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SPA	Special Protection Area

Reference Documentation

Document Number	Title
N/A	No other documents are referenced within this appendix

1 Matrix Key

1. Evidence for, or against, adverse effects on designated site qualifying features and Likely Significant Effect is detailed within the footnotes to the integrity matrices.

✓ = Likely Significant Effect cannot be excluded

X = Likely Significant Effect can be excluded

C = Construction

O = Operation and Maintenance

D = Decommissioning

■ Effect not relevant to feature (no potential for pathway)

2 Index to Matrices

2. This appendix presents the screening matrices for Outer Dowsing Offshore Wind Farm (ODOW, hereafter 'The Project') promoted by Outer Dowsing Offshore Wind (hereafter 'the Applicant') in accordance with the structure and format specific in PINS Advice Note 10 (August 2022, version 9).

Table 2.1 Details on all matrices included in this appendix

Matrix	Site included in the assessment
Matrix 1	North Norfolk Sandbanks and Saturn Reef SAC
Matrix 2	Inner Dowsing Sandbanks and Saturn Reef SAC
Matrix 3	The Wash and North Norfolk Coast SAC
Matrix 4	Humber Estuary Ramsar
Matrix 5	Humber Estuary SAC
Matrix 6	Gibraltar Point RAMSAR
Matrix 7	The Wash RAMSAR
Matrix 8	Southern Berwickshire and North Sea Northumberland SAC
Matrix 9	Moray Firth SAC
Matrix 10	Humber Estuary Southern North Sea SAC
Matrix 11	The Wash and North Norfolk Coast SAC Humber Estuary SAC
Matrix 12	Berwickshire The Wash and North Northumberland Norfolk Coast SAC
Matrix 13	Transboundary sites for Harbour porpoise (12 sites)
Matrix 14	Transboundary sites for seals (12 sites)
Matrix 15	Transboundary sites for Harbour seals (12 sites)
Matrix 16	Transboundary sites for Grey seals (12 sites)
Matrix 17 ¹⁵	Greater Wash SPA
Matrix 18 ¹⁶	Humber Estuary Ramsar
Matrix 19 ¹⁷	Humber Estuary SPA
Matrix 20 ¹⁸	North Norfolk Coast SPA
Matrix 21 ¹⁹	Gibraltar Point Ramsar
Matrix 22 ²⁰	Gibraltar Point SPA
Matrix 23 ²¹	The Wash Ramsar
Matrix 24 ²²	The Wash SPA
Matrix 25 ²³	Great Yarmouth North Denes SPA
Matrix 26 ²⁴	Flamborough and Filey Coast SPA
Matrix 27 ²⁵	Outer Thames Estuary SPA
Matrix 28 ²⁶	Alde-Ore Estuary Ramsar
Matrix 29 ²⁷	Alde-Ore Estuary SPA
Matrix 30 ²⁸	Northumbria Coast SPA
Matrix 31 ²⁹	Foulness (Mid-Essex Coast Phase 5) SPA
Matrix 32 ³⁰	Thanet Coast and Sandwich Bay SPA
Matrix 33 ³¹	Northumberland Marine SPA
Matrix 34 ³²	Coquet Island SPA
Matrix 35 ³³	Dungeness, Romney Marsh and Rye Bay SPA
Matrix 36 ³⁴	Farne Islands SPA

Matrix	Site included in the assessment
Matrix 37 35	Solent and Southampton Water SPA
Matrix 38	St Abb's Head to Fast Castle SPA
Matrix 39 36	Firth of Forth SPA
Matrix 40 37	Forth Islands SPA
Matrix 41 38	Poole Harbour Ramsar
Matrix 42 39	Poole Harbour SPA
Matrix 43 40	Imperial Dock Lock, Leith SPA
Matrix 44 41	Firth of Tay and Eden Estuary SPA
Matrix 45 42	Chesil Beach and The Fleet SPA
Matrix 46 43	Fowlsheugh SPA
Matrix 47 44	Ythan Estuary, Sands of Forvie and Meikle Loch SPA
Matrix 48 45	Ythan Estuary and Meikle Loch Ramsar
Matrix 49	Buchan Ness to Collieston Coast SPA
Matrix 50 46	Troup, Pennan and Lion's Heads SPA
Matrix 51 47	East Caithness Cliffs SPA
Matrix 52 48	North Caithness Cliffs SPA
Matrix 53 49	Pentland Firth Islands SPA
Matrix 54	Copinsay SPA
Matrix 55 50	Hoy SPA
Matrix 56	Calf of Eday SPA
Matrix 57	Rousay SPA
Matrix 58 51	Marwick Head SPA
Matrix 59 52	Fair Isle SPA
Matrix 60 53	West Westray SPA
Matrix 61 54	Papa Westray (North Hill and Holm) SPA
Matrix 62 55	Sumburgh Head SPA
Matrix 63 56	Noss SPA
Matrix 64	Foula SPA
Matrix 65 57	Fetlar SPA
Matrix 66 58	Hermaness, Saxa Vord and Valla Field SPA
Matrix 67 59	Transboundary sites for Lesser black-backed gull (3 sites)
Matrix 68 60	Transboundary sites for Northern fulmar (9 sites)
Matrix 69 61	Transboundary sites for Manx shearwater (4 sites)
Matrix 70 62	Humber Estuary SAC
Matrix 63	River Derwent SAC
Matrix 71 64	Humber Estuary SPA
Matrix 72 65	Humber Estuary Ramsar Site
Matrix 73 66	Humber Estuary SAC
Matrix 74 67	Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC
Matrix 75 68	The Wash SPA
Matrix 76 69	The Wash Ramsar Site
Matrix 77 70	The Wash & North Norfolk Coast SAC
Matrix 78 71	Greater Wash SPA
Matrix 79 72	Gibraltar Point SPA

Matrix	Site included in the assessment
Matrix 8073	Gibraltar Point Ramsar Site
Matrix 8174	North Norfolk SPA
Matrix 8275	North Norfolk RAMSAR

3 Effects Considered

3. Potential effects on designated sites which are considered within the submitted information to support the Report to Inform Appropriate Assessment (RIAA) for the Habitats Regulation Assessment (HRA) of Outer Dowsing Offshore Wind are provided in Table 3.1 below.

Table 3.1: Designated sites and impacts considered for assessment within the RIAA

Designations	Impacts Considered in Matrices
Subtidal and intertidal benthic ecology	
North Norfolk Sandbanks and Saturn Reef SAC	Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Physical habitat loss / disturbance Electromagnetic fields (EMF) In-combination
Inner Dowsing Sandbanks and Saturn Reef SAC	Physical habitat loss / disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
The Wash and North Norfolk Coast SAC	Physical habitat loss / disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
Humber Estuary Ramsar	Physical habitat loss / disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
Humber Estuary SAC	Physical habitat loss / disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS)

Designations	Impacts Considered in Matrices
	Changes to physical processes Electromagnetic fields (EMF) In-combination
Gibraltar Point Ramsar	Physical habitat loss / disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
The Wash Ramsar	Physical habitat loss/ disturbance Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
Marine Mammals	
Southern North Sea SAC	Underwater noise Vessel disturbance Collision risk Indirect pollution Accidental pollution Changes to prey In-combination effects
Humber Estuary SAC and RAMSAR	Underwater noise Vessel disturbance Collision risk Indirect pollution Accidental pollution Changes to prey Habitat loss Disturbance at haul out In-combination effects
Berwickshire and North Northumberland Coast SAC	Underwater noise Vessel disturbance Collision Risk Indirect pollution Accidental pollution Changes to prey Habitat loss In-combination effects

Designations	Impacts Considered in Matrices
The Wash and North Norfolk Coast SAC	Underwater noise Vessel disturbance Collision Risk Indirect pollution Accidental pollution Changes to prey Habitat loss Disturbance at haul out In-combination effects
Transboundary sites for Harbour porpoise (12 sites)	Underwater noise Vessel disturbance Collision Risk Indirect pollution Accidental pollution Changes to prey In-combination effects
Moray Firth SAC	Underwater noise Vessel disturbance Collision Risk Indirect pollution Accidental pollution Changes to prey Habitat loss In-combination effects
Transboundary sites for seals (12 sites)	Underwater noise Vessel disturbance Collision Risk Indirect pollution Accidental pollution Changes to prey Habitat loss Disturbance at haul out In-combination effects
Offshore and intertidal ornithology	
Greater Wash SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Humber Estuary Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure

Designations	Impacts Considered in Matrices
	Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Humber Estuary SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
North Norfolk Coast SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Gibraltar Point Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Gibraltar Point SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
The Wash Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
The Wash SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species

Designations	Impacts Considered in Matrices
Great Yarmouth North Denes SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Flamborough and Filey Coast SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Outer Thames Estuary SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Alde-Ore Estuary Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Alde-Ore Estuary SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Coquet Island SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Northumbria Coast SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones

Designations	Impacts Considered in Matrices
	Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Foulness (Mid-Essex Coast Phase 5) SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Thanet Coast and Sandwich Bay SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Northumberland Marine SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Dungeness, Romney Marsh and Rye Bay SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Farne Islands SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Solent and Southampton Water SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk

Designations	Impacts Considered in Matrices
Firth of Forth SPA	Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Forth Islands SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Poole Harbour Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Poole Harbour SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Imperial Dock Lock, Leith SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Firth of Tay and Eden Estuary SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species

Designations	Impacts Considered in Matrices
Chesil Beach and The Fleet SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Fowlsheugh SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Ythan Estuary and Meikle Loch Ramsar	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Troup, Pennan and Lion's Heads SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
East Caithness Cliffs SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
North Caithness Cliffs SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones

Designations	Impacts Considered in Matrices
	<p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
Pentland Firth Islands SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
Hoy SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
Marwick Head SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
Fair Isle SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
West Westray SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p> <p>Barrier effects for migratory waterbirds</p> <p>Indirect impacts through effects on habitats and prey species</p>
Papa Westray (North Hill and Holm) SPA	<p>Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones</p> <p>Direct disturbance and displacement due to the presence of array infrastructure</p> <p>Collision risk</p>

Designations	Impacts Considered in Matrices
Sumburgh Head SPA	Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Noss SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Fetlar SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Hermaness, Saxa Vord and Valla Field SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Transboundary sites for Lesser black-backed gull (3 sites)	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Transboundary sites for Northern fulmar (9 sites)	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species

Designations	Impacts Considered in Matrices
Transboundary sites for Manx shearwater (4 sites)	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of array infrastructure Collision risk Barrier effects for migratory waterbirds Indirect impacts through effects on habitats and prey species
Migratory fish	
Humber Estuary SAC	Underwater noise, Suspended sediment / deposition, Indirect pollution, Accidental pollution, Electromagnetic field (EMF), Invasive Non-Native Species (INNS), Physical habitat loss / disturbance, Changes to prey In-combination effects
River Derwent SAC	Underwater noise, Suspended sediment / deposition, Indirect pollution, Accidental pollution, Electromagnetic field (EMF), Invasive Non-Native Species (INNS), Physical habitat loss / disturbance, Changes to prey In-combination effects
Onshore ecology	
Humber Estuary SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat for birds outside the SPA, Risk of pollution,
Humber Estuary Ramsar Site	Loss of estuary habitats, Risk of disturbance/displacement, Loss of foraging and roosting habitat for birds outside the RAMSAR site, Risk of pollution,
Humber Estuary SAC	Risk of loss or damage to estuary habitats Risk of pollution
Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC	Risk of loss, damage and/or disturbance of habitats Disturbance of species Risk of pollution
The Wash SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution,
The Wash Ramsar Site	Risk of loss or damage to habitats,

Designations	Impacts Considered in Matrices
	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution,
The Wash & North Norfolk Coast SAC	Risk of loss or damage to habitats, Risk of disturbance, Loss of foraging, roosting and nesting habitat, Reduction of habitat quality, Displacement of otter and reduction of otter habitat
Greater Wash SPA	Risk of loss of or damage to habitats, Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution,
Gibraltar Point SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution,
Gibraltar Point Ramsar Site	Risk of loss of or damage to habitats, Risk of disturbance, Loss of foraging, roosting and nesting habitat, Risk of pollution, Loss or decline in populations of scarce invertebrates and plants,
North Norfolk SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat,
North Norfolk RAMSAR	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat,

3.1 Sites designated with subtidal and intertidal benthic ecology features

Matrix 1: North Norfolk Sandbanks and Saturn Reef SAC

Name of designated site:		North Norfolk Sandbanks and Saturn Reef SAC																						
Site Code:		UK0030358																						
Closest Distance to Project		5.9 km to array / 17.7 km to ECC / 0.0 km to ANS / 39.5 km to biogenic reef / 69.6km to ORCP																						
Likely Effects of Project																								
Effect	Suspended sediment / deposition	Indirect pollution			Accidental pollution			INNS			Changes to physical processes			Physical habitat loss / disturbance			EMF			In-combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Reefs	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	Xc		Xc		Xc		√d	√d	√d
Sandbanks which are slightly covered by sea water all of the time	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	Xc		Xc		Xc		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the SAC, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 1

Matrix 2: Inner Dowsing, Race Bank, and North Ridge SAC

Name of designated site: Inner Dowsing, Race Bank, and North Ridge SAC																								
Site Code: UK0030370																								
Closest Distance to Project: 17.8 km to array / 0.0 km to ECC / 30.0 km to ANS / 0.0 km to biogenic reef / 0.0 to ORCP																								
Likely Effects of Project																								
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Reefs	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		√a		√c	√c	√c
Sandbanks which are slightly covered by sea water all of the time	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		√a		√c	√c	√c

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the SAC, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 2

Matrix 3: The Wash and North Norfolk Coast SAC

Name of designated site: The Wash and North Norfolk Coast SAC																								
Site Code: UK0017075																								
Closest Distance to Project: 48.4 km to array / 13.4 km to ECC / 50.4 km to ANS / 0.0 km to biogenic reef / 19.3km to ORCP																								
Likely Effects of Project																								
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Sandbanks which are slightly covered by sea water all of the time	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Mudflats and sandflats not covered by seawater at low tide	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Large shallow inlets and bays	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Reefs	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Salicornia and other annuals colonizing mud and sand	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the SAC, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 3

Matrix 4: Humber Estuary Ramsar

Name of designated site: Humber Estuary Ramsar																								
Site Code: UK11031 (663)																								
Closest Distance to Project: 54.0 km to array / 12.1 km to ECC / 47.5 km to ANS / 18.2 km to biogenic reef / 15.3 km to ORCP																								
Likely Effects of Project																								
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Dune systems with humid dune slacks	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Estuarine waters	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Intertidal mud and sand flats	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Saltmarshes	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Coastal brackish/saline lagoons	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the SAC, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 4

Matrix 5: Humber Estuary SAC

Name of Humber Estuary SAC designated site: Site Code: UK0030170 Closest Distance 54.4 km to array / 18.5 km to ECC / 47.5 km to ANS / 23.8 km to biogenic reef / 19.7km to ORCP to Project Likely Effects of Project																								
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Estuaries	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Mudflats and sandflats not covered by seawater at low tide	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Sandbanks which are slightly covered by sea water all the time	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Salicornia and other annuals colonizing mud and sand	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Atlantic salt meadows	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the SAC, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 5

Matrix 6: Gibraltar Point Ramsar

Name of designated site:		Gibraltar Point Ramsar																									
Site Code:		UK11027 (589)																									
Closest Distance to Project		63.1 km to array / 13.3 km to ECC / 70.5 km to ANS / 1.6 km to biogenic reef / 19.3km to ORCP																									
Likely Effects of Project																											
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Estuarine mudflats	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Sandbanks	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Saltmarsh	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d
Dunes	Xc		Xc	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xc		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the site, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 6

Matrix 7: The Wash Ramsar

Name of designated site: The Wash Ramsar																											
Site Code: UK11072 (395)																											
Closest Distance to Project 66.5 km to array / 16.4 km to ECC / 74.0 km to ANS / 3.8 km to biogenic reef / 22.7km to ORCP																											
Likely Effects of Project																											
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Saltmarshes	Xa	Xa	Xa	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xa		√d	√d	√d
Estuaries	Xa	Xa	Xa	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xa		√d	√d	√d
Major intertidal banks of sand and mud	Xa	Xa	Xa	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xa		√d	√d	√d
Shallow water	Xa	Xa	Xa	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xa		√d	√d	√d
Deep channels	Xa	Xa	Xa	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b		Xa		√d	√d	√d

Evidence supporting conclusions

- √a Based on proximity to the proposed development, it is considered that potential effects may reach the site, within which the features are located. Therefore, a finding of potential LSE is appropriate.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc Due to the distance of the site, physical habitat loss/ disturbance and EMF effects are not anticipated to arise due to the distance from the site. EMF effects only arise from the cables when in operation and therefore there is no pathway for effect for EMF during construction and decommissioning. Therefore, there is no LSE for either of these effects.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 7

3.2 Sites designated with marine mammal features

Matrix 8: Southern North Sea SAC

Name of designated site: Southern North Sea SAC																											
Site Code: UK0030395																											
Closest Distance to Project (Offshore) 0.0 km to array / 1.1 km to ECC / 0.0 km to ANS / 34.7 km to biogenic reef / 42.3km to ORCP																											
Likely Effects of Project																											
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Habitat loss			Changes to prey			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Harbour porpoise	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√a	√a	√b	√c	√c	√c

Evidence supporting conclusions

- √a Table 5.4 of the HRA Screening Report (Appendix 7.2 of the RIAA) considers that The Project is located within 0 km of the SAC. Therefore, due to proximity to the source there is potential for a likely significant effect (LSE).
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 8

Matrix 9: Humber Estuary SAC

Name of designated site: Humber Estuary SAC																														
Site Code: UK0030170																														
Closest Distance to Project (offshore): 54.4 km to array / 18.5 km to ECC / 47.5 km to ANS / 23.8 km to biogenic reef / 19.7km to ORCP																														
Likely Effects of Project																														
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	C	C	C	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Grey seal	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√g	√g	√g	Xe	Xe	Xe	√c	√c	√b	√f	√f	√f			

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between grey seal and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased rates of vessel disturbance of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased collision risk of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat. Therefore, a finding of no potential LSE is appropriate
- √f It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.
- √g The site is within the maximum range for these effects as informed by modelling and therefore there is a potential for an LSE.

End of Matrix 9

Matrix 10: Humber Estuary Ramsar

Name of designated site: Humber Estuary RAMSAR																											
Site Code: UK0030170																											
Closest Distance to Project (offshore) 54.0 km to array / 12.1 km to ECC / 47.5 km to ANS / 18.2 km to biogenic reef / 15.3km to ORCP																											
Likely Effects of Project																											
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	C	C	C	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Grey seal	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√g	√g	√g	Xe	Xe	Xe	√c	√c	√b	√f	√f	√f

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between grey seal and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the site (Vincent et al., 2017) may result in increased rates of vessel disturbance of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the site (Vincent et al., 2017) may result in increased collision risk of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat. Therefore, a finding of no potential LSE is appropriate
- √f It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.
- √g The site is within the maximum range for these effects as informed by modelling and therefore there is a potential for an LSE.

End of Matrix 10

Matrix 11: The Wash and North Norfolk Coast SAC

Name of designated site:		The Wash and North Norfolk Coast SAC																												
Site Code:		UK0017075																												
Closest Distance to Project (offshore)		48.4 km to array / 13.4 km to ECC / 50.4 km to ANS / 0.0 km to biogenic reef / 19.3km to ORCP																												
Likely Effects of Project																														
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	C	C	C	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Harbour seal	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f	Xe	Xe	Xe	Xe	Xe	Xe	√g	√g	√g			

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between harbour seal and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased rates of vessel disturbance of harbour seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased collision risk of harbour seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat. Therefore, a finding of no potential LSE is appropriate
- √f The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result changes to prey of harbour seal. Therefore, a finding of potential LSE is appropriate.
- √g It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 11

Matrix 12: Berwickshire and North Northumberland Coast SAC

Name of designated site: Berwickshire and North Northumberland Coast SAC																														
Site Code: UK0030395																														
Closest Distance to Project (Offshore): 260.4 km to array / 262.0 km to ECC / 232.6 km to ANS / 259.2 km to biogenic reef / 262.0km to ORCP																														
Likely Effects of Project																														
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Grey Seal	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f	Xe	Xe	Xe	Xe	Xe	Xe	√g	√g	√g			

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between grey seal and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased rates of vessel disturbance of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased collision risk of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe No potential for LSE. These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat.
- √f The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result changes to prey of grey seal. Therefore, a finding of potential LSE is appropriate.
- √g It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 12

Matrix 13: Moray Firth SAC

Name of designated site: Moray Firth SAC																								
Site Code: UK0019808																								
Closest Distance to Project (Offshore) 515.0 km to array / 525.5 km to ECC / 487.0 km to ANS / 521.2 km to biogenic reef / 525.5km to ORCP																								
Likely Effects of Project																								
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Bottlenose dolphin	√a	√a	√b	√a	√a	√b	√a	√a	√b	Xc	Xc	Xc	Xc	Xc	Xc	√a	√a	√b	Xc	Xc	Xc	√a	√a	√a

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from photo-identification data. Therefore, there is the potential for some level of interaction between bottlenose dolphin associated with the Moray Firth SAC and these effects from the project. The impacts during decommissioning are considered to be similar and potentially less than those outlined in the construction phase.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- Xc No potential for LSE. These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat.

End of Matrix 13

Matrix 14: Transboundary sites for Harbour porpoise (12 sites)

Name of designated site: Transboundary sites for Harbour porpoise (12 sites)																								
Site Code: Various																								
Closest Distance to Project (Offshore): Various																								
Likely Effects of Project																								
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Habitat loss			Changes to prey			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Bancs de Flandres SCA	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Doggersbank (Netherlands) SAC;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Klaverbak SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Noordzeekustone SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
SBZ 1 SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
SBZ 2 SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
SBZ 3 SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Vlaamse Banked SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Vlakte van de Raan SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Voordelta SCI;	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Waddenzee SCI; and	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa
Westerschelde & Saeftinghe SCI.	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa

Evidence supporting conclusions

Xa All sites have been screened out based on a lack of evidence to suggest connectivity (no site within 26 km effective disturbance range (EDR) of the Project). Therefore, a finding of no LSE is appropriate.

End of Matrix 14

Matrix 15: Transboundary sites for Harbour seals (12 sites)

Name of designated site: Transboundary sites for Harbour and Grey seals (12 sites)																														
Site Code: Various																														
Closest Distance to Project: Various																														
Likely Effects of Project																														
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Doggersbank (Netherlands) SAC;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Klaverbak SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between seals and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased rates of vessel disturbance of seals (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased collision risk of seals (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe No potential for LSE. These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat.
- √f It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 15

Matrix 16: Transboundary sites for Grey seals (12 sites)

Name of designated Transboundary sites for Harbour and Grey seals (12 sites) site:																														
Site Code: Various																														
Closest Distance to Various Project																														
Likely Effects of Project																														
Effect	Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			Habitat loss			Disturbance at haul out			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Bancs de Flandres SCA;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Doggersbank (Netherlands) SAC;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Klaverbak SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Noordzeekustone SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
SBZ 1 SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
SBZ 2 SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
SBZ 3 SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Vlaamse Banked SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Vlakte van de Raan SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Voordelta SCI;	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Waddenzee SCI; and	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f
Westerschelde & Saefthinghe SCI.	√a	√a	√b	√c	√c	√b	√d	√d	√b	Xe	Xe	Xe	Xe	Xe	Xe	√a	√a	√b	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	Xe	√f	√f	√f

Evidence supporting conclusions

- √a Potential for site connectivity is indicated from seal use at sea data (Vincent et al., 2017). Therefore, there is the potential for some level of interaction between grey seal and underwater noise associated with the Project. Potential for LSE concluded.
- √b The HRA Screening Report (Appendix 7.2 of the RIAA) considers that the effects from The Project during decommissioning are similar and potentially less intense than those outlined in the construction phase. Therefore, a finding of potential LSE is appropriate.
- √c The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased rates of vessel disturbance of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- √d The location of the project relative to the at sea usage area of grey seal together with connectivity to the SAC (Vincent et al., 2017) may result in increased collision risk of grey seal (with vessels associated with activity relating to the Project). Therefore, a finding of potential LSE is appropriate.
- Xe No potential for LSE. These effects have been screened out from assessment as a result of the distance between the Project and the designated site, the scale of the potential change and the scale and extent of alternative habitat.
- √f It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 16

3.3 Sites designated with offshore and intertidal ornithology features

Matrix 17: Greater Wash SPA

Name of Greater Wash SPA designated site: Site Code: UK9020329 Closest Distance 24.6 km to array, 0.0km to ECC to Project Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects			
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common scoter	√a	√a	√a	√a	√a	√a		√a			√a						√c	√c	√c
Red-throated diver	√a	√a	√a	√a	√a	√a		√a			√a						√c	√c	√c
Little gull	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a							√c	
Little tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a							√c	
Common tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a							√c	
Sandwich tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a							√c	

Evidence supporting conclusions

- √a The cable corridor directly overlaps with this SPA with red-throated diver and common scoter having high or very high vulnerability to disturbance/displacement from offshore wind farms and vessel disturbance. All other features have low vulnerability to disturbance and displacement (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016; Fliessbach *et al.*, 2019). The pathway to insufficient prey resource is weak for all designated features. Temporary and low-impact effects are anticipated for local fish and benthic ecology. As such, there would be sufficient alternative resource available to support the species population. There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions.
- Xb The Project array is beyond the mean-maximum +1SD foraging range (Woodward *et al.*, 2019) for all designated breeding seabird species and therefore has no breeding season connectivity. All species may be vulnerable to collisions for this site, but have low sensitivity. As agreed with Natural England, Sandwich tern has been screened out for displacement, and little gull and common tern have been assessed for migratory collision risk.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 17

Matrix 18: Humber Estuary Ramsar

Name of designated site: Humber Estuary Ramsar																					
Site Code: UK11031 (663)																					
Closest Distance to Project 54.0 km to array, 12.1 km to ECC																					
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
European golden plover	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Red knot	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Dunlin	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Black-tailed godwit	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Common redshank	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Common shelduck	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		
Bar-tailed godwit	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a								√a		

Evidence supporting conclusions

- √a There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions. The pathway to insufficient prey resource is weak for all designated features. Temporary and low-impact effects are anticipated for local fish and benthic ecology. As such, there would be sufficient alternative resource available to support the species population. Therefore, LSE cannot be discounted in relation to all effects alone.
- Xb Wintering waterbirds are not prone to displacement impacts due to the distance from the ECC to the site exceeding 2km.

End of Matrix 18

Matrix 19: Humber Estuary SPA

Name of Humber Estuary SPA designated site:
 Site Code: UK9006111
 Closest Distance 54.0 km to array, 12.1 km to ECC to Project
 Likely Effects of Project

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Avocet	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Bar-tailed godwit	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Bittern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Black-tailed godwit	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Dunlin	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Golden plover	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Hen harrier	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Knot	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Little tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Marsh harrier	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Redshank	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Ruff	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Shelduck	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Pink-footed goose	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Wigeon	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Ringed plover	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Curlew	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Sanderling	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Oystercatcher	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Dark-bellied brent goose	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Mallard	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Pochard	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Goldeneye	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	
Scaup	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a						√c	

Evidence supporting conclusions

- ✓a There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions. The pathway to insufficient prey resource is weak for all designated features. Temporary and low-impact effects are anticipated for local fish and benthic ecology. As such, there would be sufficient alternative resource available to support the species population. Therefore, LSE cannot be discounted in relation to all effects alone.
- ✗b Wintering waterbirds are not prone to displacement impacts due to the distance from the ECC to the SPA exceeding 2km.
- ✓c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 19

Matrix 20: North Norfolk Coast SPA

Name of North Norfolk Coast SPA designated site: Site Code: UK9009031 Closest Distance 57.2 km to array, 29.9 km to ECC to Project Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Dark-bellied brent goose	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Eurasian marsh harrier	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Eurasian wigeon	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Great bittern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Pied avocet	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Pink-footed goose	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Red knot	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Sandwich tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Common tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Little tern	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	
Assemblage features	Xb	Xb	Xb	Xb	Xb	Xb		√a			√a									√c	

Evidence supporting conclusions

- √a The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. There is potential for migratory seabird and waterbirds to be impacted by the array through barrier effects and collisions. The maximum site-specific foraging range for Sandwich tern from this site is 54 km (Woodward *et al.*, 2019), therefore the Project is beyond the range of this species from this location. Sandwich tern has been screened out for displacement effects and screened in for collision risk. Therefore, LSE cannot be discounted in relation to all effects alone.
- Xb The Project array is beyond the disturbance impact range for designated species and therefore has no connectivity. Therefore, LSE can be discounted in relation to these effects alone.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 20

Matrix 21: Gibraltar Point Ramsar

Name of Gibraltar Point Ramsar designated site: Site Code: UK11027 (589) Closest Distance 63.1 km to array, 13.3 km to ECC to Project Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	B
Grey plover	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Sanderling	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Dark-bellied brent goose	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Bar-tailed godwit	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	

Evidence supporting conclusions

- Xa The Project array is beyond the disturbance impact range for designated species and therefore has no connectivity. Therefore, LSE can be discounted in relation to these effects alone.
- √b There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions on migration. Therefore, LSE cannot be discounted in relation to these effects alone.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 21

Matrix 22: Gibraltar Point SPA

Name of designated site:		Gibraltar Point SPA																
Site Code:		UK9008022																
Closest Distance to Project		63.1 km to array / 13.3 km to ECC / 70.5 km to ANS / 1.6 km to biogenic reef / 19.3 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In-combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Grey plover	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Sanderling	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Little Tern	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Bar-tailed godwit	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward et al., 2019) for designated species and therefore has no breeding season connectivity. The Project array is beyond the disturbance impact range for designated waterbird species and therefore has no connectivity. Therefore, LSE can be discounted in relation to these effects alone.
- √b There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions. Therefore, LSE cannot be discounted in relation to these effects alone.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 22

Matrix 23: The Wash Ramsar

Name of designated site: The Wash Ramsar																		
Site Code: UK11072 (395)																		
Closest Distance to Project: 66.5 km to array / 16.4 km to ECC / 74.0 km to ANS / 3.8 km to biogenic reef / 22.7 km to ORCP																		
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Eurasian oystercatcher	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Grey plover	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Red knot	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Sanderling	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Eurasian curlew	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Common redshank	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Ruddy turnstone	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Pink-footed goose	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Dark-bellied brent goose	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Common shelduck	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Northern pintail	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Dunlin	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	
Bar-tailed godwit	Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	

Evidence supporting conclusions

- Xa The Project array is beyond the disturbance impact range for designated species and therefore has no connectivity. Therefore, LSE can be discounted in relation to these effects alone.
- √b There is potential for migratory waterbirds to be impacted by the array through barrier effects and collisions on migration. Therefore, LSE cannot be discounted in relation to all effects alone.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 23

Matrix 24: The Wash SPA

Name of designated site: The Wash SPA																			
Site Code: UK9008021																			
Closest Distance to Project: 66.5 km to array / 16.4 km to ECC / 74.0 km to ANS / 3.8 km to biogenic reef / 22.7 km to ORCP																			
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In-combination effects			
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Bar-tailed godwit	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Common scoter	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Black-tailed godwit	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Common goldeneye	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Common redshank	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Common shelduck	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Dark-bellied brent goose	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Dunlin	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Eurasian curlew	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Eurasian oystercatcher	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Eurasian wigeon	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Gadwall	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Grey plover	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Northern pintail	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Pink-footed goose	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Red knot	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Ruddy turnstone	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Sanderling	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Tundra swan	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Common tern	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Little tern	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	
Assemblage features	Xa	Xa	Xa	Xa	Xa	Xa		√b				√b						√c	

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward et al., 2019) for designated species and therefore has no breeding season connectivity. The Project array is beyond the disturbance impact range for designated waterbird species and therefore has no connectivity. Therefore, LSE can be discounted in relation to these effects alone.

- ✓b The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. There is potential for migratory waterbirds and seabirds to be impacted by the array through barrier effects and collisions. Therefore, LSE cannot be discounted in relation to these effects alone.
- ✓c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 24

Matrix 25: Great Yarmouth North Denes SPA

Name of designated site:		Great Yarmouth North Denes SPA																	
Site Code:		UK9009271																	
Closest Distance to Project		84.5 km to array / 73.1 km to ECC / 69.8 km to ANS / 58.6 km to biogenic reef / 93.8 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In-combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. The Project concludes negligible potential for impact on migratory birds from this SPA passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 25

Matrix 26: Flamborough and Filey Coast SPA

Name of designated site:		Flamborough and Filey Coast SPA																			
Site Code:		UK9006101																			
Closest Distance to Project		93.5 km to array																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			Barrier effects due to the presence of turbines			Indirect impacts through effects on habitats and prey species			In combination effects		
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D		
Kittiwake	Xb	Xb	Xb	Xb	Xb	Xb		√a			Xb	Xb	Xb					√d			
Herring gull	Xb	Xb	Xb	Xb	Xb	Xb		√a			Xb	Xb	Xb					√d			
Gannet	√c	√c	√c	√c	√c	√c		√a			Xb	Xb	Xb				√d	√d	√d		
Guillemot	√c	√c	√c	√c	√c	√c	Xb	Xb	Xb	Xb	Xb	Xb				√d	√d	√d			
Razorbill	√c	√c	√c	√c	√c	√c	Xb	Xb	Xb	Xb	Xb	Xb				√d	√d	√d			
Puffin	√c	√c	√c	√c	√c	√c	Xb	Xb	Xb	Xb	Xb	Xb				√d	√d	√d			
Fulmar	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb									
European shag	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb									
Cormorant	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb									

d

Evidence supporting conclusions

- Xa These designated features are either beyond mean-maximum +1SD foraging range or not deemed sensitive to these offshore wind farm impacts (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE.
- √b The Project array is within the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Certain designated features have high or very high vulnerability to displacement from offshore windfarms (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore, there is a potential for LSE. Therefore, guillemot, razorbill, gannet and puffin have potential LSE for disturbance and displacement impacts during all phases.
- √c The Project array is within the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Certain designated features have high or very high vulnerability to collision risk with turbines (Bradbury *et al.*, 2014). Therefore, there is a potential for LSE.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 26

Matrix 27: Outer Thames Estuary SPA

Name of designated site:		Outer Thames Estuary SPA																
Site Code:		UK9020309																
Closest Distance to Project		97.8 km to array / 84.8 km to ECC / 82.4 km to ANS / 69.7 km to biogenic reef / 104.0 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In-combination effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Red-throated diver	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. The Project array is beyond the disturbance impact range for designated species and therefore has no connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 27

Matrix 28: Alde-Ore Estuary Ramsar

Name of designated site:		Alde-Ore Estuary Ramsar																	
Site Code:		UK11002 (862)																	
Closest Distance to Project		147.4 km to array / 131.3 km to ECC / 136.2 km to ANS / 110.4 km to biogenic reef / 139.2 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In Combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Lesser black-backed gull		Xb	Xb	Xb	Xb	Xb	Xb		√a		Xb	Xb	Xb				Xb	√c	Xb
Pied avocet		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Common redshank		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb

Evidence supporting conclusions

- √a On the advice of Natural England, potential for LSE on Lesser black-backed gull due to collisions is screened in for the non-breeding season. Therefore, LSE cannot be discounted in relation to all effects alone.
- Xb The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward et al., 2019) for designated seabird species and therefore has no breeding season connectivity.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 28

Matrix 29: Alde-Ore Estuary SPA

Name of designated site:		Alde-Ore Estuary SPA																	
Site Code:		UK9009112																	
Closest Distance to Project		147.2 km to array / 131.3 km to ECC / 136.2 km to ANS / 110.4 km to biogenic reef / 139.2 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Lesser black-backed gull	Xb	Xb	Xb	Xb	Xb	Xb		√a		Xb	Xb	Xb				Xb	√c	Xb	
Pied avocet	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb	
Common redshank	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb	
Ruff	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb	
Little tern	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb	
Sandwich tern	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb	

Evidence supporting conclusions

- √a On the advice of Natural England, potential for LSE on Lesser black-backed gull due to collisions is screened in for the non-breeding season. Therefore, LSE can not be discounted in relation to all effects alone.
- Xb The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. The maximum site-specific foraging range for lesser black-backed gull from this site is 124km (Woodward *et al.*, 2019), therefore the Project is beyond the range of this species from this location.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 29

Matrix 30: Northumbria Coast SPA

Name of designated site:		Northumbria Coast SPA																	
Site Code:		UK9006131																	
Closest Distance to Project		198.6 km to array / 193.2 km to ECC / 173.6 km to ANS / 191.9 km to biogenic reef / 193.2 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic Tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little Tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 30

Matrix 31: Foulness (Mid-Essex Coast Phase 5) SPA

Name of designated site:		Foulness (Mid-Essex Coast Phase 5) SPA																	
Site Code:		UK9009246																	
Closest Distance to Project		202.7 km to array / 181.1 km to ECC / 196.3 km to ANS / 161.2 km to biogenic reef / 182.3 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Common tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa	
Little tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa	
Sandwich tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa	

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 31

Matrix 32: Thanet Coast and Sandwich Bay SPA

Name of designated site:		Thanet Coast and Sandwich Bay SPA																				
Site Code:		UK9012071																				
Closest Distance to Project		231.5 km to array / 213.1 km to ECC / 221.7 km to ANS / 191.7 km to biogenic reef / 214.2 km to ORCP																				
Likely Effects of Project																						
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combinations effects					
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 32

Matrix 33: Northumberland Marine SPA

Name of designated site:		Northumberland Marine SPA																	
Site Code:		UK9020325																	
Closest Distance to Project		237.7 km to array / 235.3 km to ECC / 210.8 km to ANS / 233.3 km to biogenic reef / 235.3 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Roseate tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Sandwich tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Guillemot		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Puffin		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Assemblage features		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa This is a marine SPA designated for foraging seabirds. Impacts from outside the SPA are considered to have no connectivity to the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix 33

Matrix 34: Coquet Island SPA

Name of designated site:		Coquet Island SPA																	
Site Code:		UK9006031																	
Closest Distance to Project		258.6 km to array / 258.8 km to ECC / 231.0 km to ANS / 256.3 km to biogenic reef / 258.8 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Puffin		√a	√a	√a	√a	√a	√a										√d	√d	√d
Roseate tern		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Common tern		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Sandwich tern		Xb	Xb	Xb	Xb	Xb	Xb	Xb	√c	Xb	Xb	Xb	Xb				Xb	√d	Xb
Arctic tern		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Puffin		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Black-headed gull		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Fulmar		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Herring gull		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb
Lesser black-backed gull		Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb				Xb	Xb	Xb

Evidence supporting conclusions

- √a The Project array is within the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Certain designated features have high or very high vulnerability to displacement from offshore windfarms (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore, there is a potential for LSE. Therefore, puffin have potential LSE for disturbance and displacement impacts during all phases.
- Xb The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √c The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Migrations of sandwich terns in the non-breeding season are likely to result in negligible numbers passing through the site. Sandwich tern have potential LSE in relation due to collision impacts during O&M.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 34

Matrix 35: Dungeness, Romney Marsh and Rye Bay SPA

Name of designated site:		Dungeness, Romney Marsh and Rye Bay SPA																	
Site Code:		UK9012091																	
Closest Distance to Project		269.6 km to array / 246.7 km to ECC / 262.5 km to ANS / 227.2 km to biogenic reef / 248.2 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Sandwich tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.

End of Matrix 35

Matrix 36: Farne Islands SPA

Name of designated site:		Farne Islands SPA																	
Site Code:		UK9006021																	
Closest Distance to Project		285.8 km to array / 289.1 km to ECC / 257.9 km to ANS / 285.9 km to biogenic reef / 289.1 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake									√a								Xc	√d	Xc
Arctic tern		Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc
Common guillemot		√b	√b	√b	√b	√b	√b	Xc	Xc	Xc	Xc	Xc	Xc				√d	√d	√d
Puffin		√b	√b	√b	√b	√b	√b	Xc	Xc	Xc	Xc	Xc	Xc				√d	√d	√d
Roseate tern		Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc
Sandwich tern		Xc	Xc	Xc	Xc	Xc	Xc	Xc	√a	Xc	Xc	Xc	Xc				Xc	√d	Xc
European shag		Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc
Great cormorant		Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc
Common tern		Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc

Evidence supporting conclusions

- √a The Project array is within the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Designated features have high or very high vulnerability to collision risk with turbines (Bradbury *et al.*, 2014). Therefore, Kittiwake has been screened into the assessment based on potential collision risk impacts. LSE can be discounted in relation to all other species and effects alone.
- √b Natural England have advised to screen in guillemot and puffin for displacement effects.
- Xc The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 36

Matrix 37: Solent and Southampton Water SPA

Name of designated site:		Solent and Southampton Water SPA																	
Site Code:		UK9011061																	
Closest Distance to Project		328.8 km to array / 282.0 km to ECC / 339.1 km to ANS / 267.7 km to biogenic reef / 289.0 km to ORCP																	
Likely Effects of Project																			
Effect	Stage of Development	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Roseate tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Sandwich tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Mediterranean gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Black-tailed godwit		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Ringed plover		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Eurasian teal		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Dark-bellied brent goose		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 37

Matrix 38: St Abb’s Head to Fast Castle SPA

Name of designated site:		St Abb’s Head to Fast Castle SPA																	
Site Code:		XXXXXX																	
Closest Distance to Project		330.0 km to array / 331.4 km to ECC / 305.3 km to ANS / 328.9 km to biogenic reef / 331.5 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot		√b	√b	√b	√b	√b	√b		Xa			Xa					√c	√c	√c
Razorbill		√b	√b	√b	√b	√b	√b		Xa			Xa					√c	√c	√c
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Outside the breeding season, impacts LSE cannot be discounted in relation to all effects alone.
- √b The Project array is outside of the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has no breeding season connectivity. Designated features have high or very high vulnerability to collision risk with turbines or displacement (Bradbury *et al.*, 2014). Therefore, species have been screened in for non-breeding season impacts.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination

End of Matrix 38

Matrix 39: Firth of Forth SPA

Name of designated site:		Firth of Forth SPA																	
Site Code:		UK9004411																	
Closest Distance to Project		355.6 km to array / 355.4 km to ECC / 327.9 km to ANS / 353.2 km to biogenic reef / 355.4 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure	Collisions for migratory waterbirds	Barrier effects for migratory waterbirds	Indirect impacts through effects on habitats and prey species	In combination effects													
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	
Sandwich tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa	

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 39

Matrix 40: Forth Islands SPA

Name of designated site:		Forth Islands SPA																			
Site Code:		UK9004171																			
Closest Distance to Project		363.7 km to array / 363.4 km to ECC / 335.9 km to ANS / 361.2 km to biogenic reef / 363.4 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D		
Gannet	√a	√a	√a	√a	√a	√a		√a									√c	√c	√c		
Kittiwake	Xd	Xd	Xd	Xd	Xd	Xd		√b									√c	√c	√c		
Guillemot	√b	√b	√b	√b	√b	√b		Xd									√c	√c	√c		
Razorbill	√b	√b	√b	√b	√b	√b		Xd									√c	√c	√c		
Puffin	√b	√b	√b	√b	√b	√b		Xd									√c	√c	√c		
Lesser black-backed gull	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
Herring gull	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
European shag	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
Sandwich tern	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
Roseate tern	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
Arctic tern	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		
Common tern	Xd	Xd	Xd	Xd	Xd	Xd		Xd									Xd	Xd	Xd		

Evidence supporting conclusions

- √a The Project array is within the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Designated features have high or very high vulnerability to collision risk with turbines and/or displacement effects (Bradbury *et al.*, 2014). Therefore, these species have been screened into the assessment based on potential collision risk and disturbance/displacement impacts.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.
- Xd The Project array is outside the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has breeding season connectivity. Designated seabird species is not vulnerable to the impact and therefore, LSE can be discounted in relation to this effect alone.

End of Matrix 41

Matrix 41: Poole Harbour Ramsar

Name of designated site:		Poole Harbour Ramsar																	
Site Code:		UK11054 (1005)																	
Closest Distance to Project		371.8 km to array / 321.9 km to ECC / 381.1 km to ANS / 309.6 km to biogenic reef / 329.9 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 41

Matrix 42: Poole Harbour SPA

Name of designated site:		Poole Harbour Ramsar																	
Site Code:		UK11054 (1005)																	
Closest Distance to Project		371.7 km to array / 321.8 km to ECC / 381.1 km to ANS / 309.6 km to biogenic reef / 329.9 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Sandwich tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Mediterranean gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions.

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 42

Matrix 43: Imperial Dock Lock, Leith SPA

Name of designated site:		Imperial Dock Lock, Leith SPA																
Site Code:		UK9004451																
Closest Distance to Project		382.8 km to array / 378.1 km to ECC / 355.8 km to ANS / 377.3 km to biogenic reef / 378.4 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 43

Matrix 44: Firth of Tay and Eden Estuary SPA

Name of designated site:		Firth of Tay and Eden Estuary SPA																
Site Code:		UK9004121																
Closest Distance to Project		395.5 km to array / 396.7 km to ECC / 367.6 km to ANS / 394.2 km to biogenic reef / 396.7 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Little tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 44

Matrix 45: Chesil Beach and The Fleet SPA

Name of designated site:		Chesil Beach and The Fleet SPA																	
Site Code:		UK9010091																	
Closest Distance to Project		403.4 km to array / 351.8 km to ECC / 411.2 km to ANS / 341.0 km to biogenic reef / 360.5 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 45

Matrix 46: Fowlsheugh SPA

Name of designated site:		Fowlsheugh SPA																			
Site Code:		UK9002271																			
Closest Distance to Project		421.5 km to array / 430.9 km to ECC / 393.4 km to ANS / 426.7 km to biogenic reef / 430.9 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D						
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Kittiwake	√b	√b	√b	√b	√b	√b		√b					√b						√d	√d	√d
Herring gull	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc	Xc				Xc	Xc	Xc
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√d	√d	√d
Razorbill	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√d	√d	√d
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. Therefore, LSE can be discounted in relation to all effects alone.
- √b The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has no breeding season connectivity. However, designated features have high or very high vulnerability to collision risk with turbines or displacement effects (Bradbury *et al.*, 2014). Therefore, some vulnerable species have been screened into the assessment for the non-breeding season based on potential collision risk and disturbance/displacement impacts.
- Xc The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √d It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 46

Matrix 47: Ythan Estuary, Sands of Forvie and Meikle Loch SPA

Name of designated site:		Ythan Estuary, Sands of Forvie and Meikle Loch SPA																	
Site Code:		UK9002221																	
Closest Distance to Project		443.1 km to array / 454.6 km to ECC / 451.1 km to ANS / 450.0 km to biogenic reef / 454.6 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Little tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Sandwich tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 47

Matrix 48: Ythan Estuary and Meikle Loch Ramsar

Name of designated site:		Ythan Estuary and Meikle Loch Ramsar																
Site Code:		UK13061 (939)																
Closest Distance to Project		456.4 km to array / 469.2 km to ECC / 428.5 km to ANS / 464.3 km to biogenic reef / 469.2 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure	Collisions for migratory waterbirds	Barrier effects for migratory waterbirds	Indirect impacts through effects on habitats and prey species	In combination effects												
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Sandwich tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 48

Matrix 49: Buchan Ness to Collieston Coast SPA

Name of designated site:		Buchan Ness to Collieston Coast SPA																	
Site Code:		XXXXXX																	
Closest Distance to Project		456.6 km to array / 469.8 km to ECC / 433.8 km to ANS / 464.8 km to biogenic reef / 469.8 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot		√b	√b	√b	√b	√b	√b		Xa			Xa							
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa		√b			√b						√c	

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. Designated seabird species is not vulnerable to the impact and therefore, LSE can be discounted in relation to this effect alone.
- √b The Project array is outside of the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore, has no breeding season connectivity. Designated features have high or very high vulnerability to collision risk with turbines or displacement (Bradbury *et al.*, 2014). Therefore, species have been screened in for non-breeding season impacts.
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination

End of Matrix 49

Matrix 50: Troup, Pennan and Lion's Heads SPA

Name of designated site:		Troup, Pennan and Lion's Heads SPA																	
Site Code:		UK9002471																	
Closest Distance to Project		498.4 km to array / 511.7 km to ECC / 470.5 km to ANS / 506.8 km to biogenic reef / 511.7 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Herring gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Razorbill		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges for all designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 50

Matrix 51: East Caithness Cliffs SPA

Name of designated site:		East Caithness Cliffs SPA																	
Site Code:		UK9001182																	
Closest Distance to Project		582.4 km to array / 590.9 km to ECC / 554.4 km to ANS / 587.0 km to biogenic reef / 590.9 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Great black-backed gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Herring gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Razorbill		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
European shag		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Great cormorant		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

- Xa The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 51

Matrix 52: North Caithness Cliffs SPA

Name of designated site:		North Caithness Cliffs SPA																			
Site Code:		UK9001181																			
Closest Distance to Project		610.4 km to array / 623.4 km to ECC / 582.5 km to ANS / 618.6 km to biogenic reef / 623.4 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Puffin	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c			
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c			
Razorbill	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c			
Kittiwake	Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa			
Fulmar	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd				Xd	Xd	Xd			

Evidence supporting conclusions

- Xa The Project array is beyond the site-specific mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.
- Xd Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range.

End of Matrix 52

Matrix 53: Pentland Firth Islands SPA

Name of designated site:		Pentland Firth Islands SPA																
Site Code:		UK9001131																
Closest Distance to Project		618.9 km to array / 632.7 km to ECC / 591.1 km to ANS / 627.7 km to biogenic reef / 632.7 km to ORCP																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone

End of Matrix 53

Matrix 54: Copinsay SPA

Name of designated site:		Copinsay SPA																	
Site Code:		XXXXXXX																	
Closest Distance to Project		630.9 km to array / 646.2 km to ECC / 608.8 km to ANS / 641.2 km to biogenic reef / 646.6 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Great black-backed gull		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges for all designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 54

Matrix 55: Hoy SPA

Name of designated site:	Hoy SPA
Site Code:	UK9002141
Closest Distance to Project	634.8 km to array / 647.5 km to ECC / 607.0 km to ANS / 642.8 km to biogenic reef / 647.5 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Peregrine falcon	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Red-throated diver	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Great skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Puffin	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Kittiwake	Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Great black-backed gull	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix 55

Matrix 56: Calf of Eday SPA

Name of designated site:		Calf of Eday SPA																	
Site Code:		XXX																	
Closest Distance to Project		667.1 km to array / 682.4 km to ECC / 645.2 km to ANS / 678.0 km to biogenic reef / 683.5 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix [5657](#)

Matrix [5758](#): Rousay SPA

Name of designated site:		Rousay SPA																	
Site Code:		8573																	
Closest Distance to Project		668.0 km to array / 683.2 km to ECC / 645.8 km to ANS / 677.9 km to biogenic reef / 683.2 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix [5758](#)

Matrix [5859](#): Marwick Head SPA

Name of designated site:		Marwick Head SPA																	
Site Code:		UK9002121																	
Closest Distance to Project		670.4 km to array / 683.9 km to ECC / 642.6 km to ANS / 679.0 km to biogenic reef / 683.9 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix [5859](#)

Matrix ~~5960~~: Fair Isle SPA

Name of designated site:		Fair Isle SPA																	
Site Code:		UK9002091																	
Closest Distance to Project		674.7 km to array / 690.0 km to ECC / 648.7 km to ANS / 690.2 km to biogenic reef / 696.7 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Great skua		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic skua		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
European shag		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fair Isle wren		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Puffin		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Razorbill		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Gannet		√b	√b	√b	√b	√b	√b	Xa	√b	Xa	Xa	√b	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa The Project array is beyond the mean-maximum +1SD foraging ranges (and maximum site-specific foraging range for fulmar) (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is no potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix ~~5960~~

Matrix ~~6061~~: West Westray SPA

Name of designated site:		West Westray SPA																			
Site Code:		UK9002101																			
Closest Distance to Project		678.5 km to array / 693.8 km to ECC / 650.9 km to ANS / 688.6 km to biogenic reef / 693.9 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D		
Arctic skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Kittiwake	Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa							Xa	√c	Xa
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa							√c	√c	√c
Razorbill	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa							√c	√c	√c
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa							Xa	Xa	Xa

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014).
It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range.
The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
- √b These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix ~~6061~~

Matrix ~~6162~~: Papa Westray (North Hill and Holm) SPA

Name of designated site:		Papa Westray (North Hill and Holm) SPA																	
Site Code:		UK9002111																	
Closest Distance to Project		684.6 km to array / 699.9 km to ECC / 657.7 km to ANS / 695.3 km to biogenic reef / 700.7 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic skua		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa The Project array is beyond the mean-maximum +1SD foraging ranges (Woodward *et al.*, 2019) for designated seabird species and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. Therefore, LSE can be discounted in relation to all effects alone.

End of Matrix ~~6162~~

Matrix ~~6263~~: Sumburgh Head SPA

Name of designated site:		Sumburgh Head SPA																	
Site Code:		UK9002511																	
Closest Distance to Project		706.5 km to array / 722.0 km to ECC / 681.8 km to ANS / 724.3 km to biogenic reef / 731.1 km to ORCP																	
Likely Effects of Project																			
Effect		Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Arctic tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
- √b This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
These designated features are beyond mean-maximum +1SD foraging range (Bradbury et al., 2014; Dierschke et al., 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c **It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.**

End of Matrix ~~6263~~

Matrix [6364](#): Noss SPA

Name of designated site:		Noss SPA																			
Site Code:		UK9002081																			
Closest Distance to Project		733.3 km to array / 749.0 km to ECC / 709.5 km to ANS / 752.7 km to biogenic reef / 759.8 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Puffin	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c			
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c			
Kittiwake	Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa			
Gannet	√b	√b	√b	√b	√b	√b	Xa	√b	Xa	Xa	√b	Xa				√c	√c	√c			
Great skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa			
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa			

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
- √b This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
- √c These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix [6364](#)

Matrix [6465](#): Foula SPA

Name of designated site:		Foula SPA																	
Site Code:		XXXXXXXX																	
Closest Distance to Project		746.7 km to array / 761.5 km to ECC / 726.1 km to ANS / 761.2 km to biogenic reef / 767.6 km to ORCP																	
Likely Effects of Project																			
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Puffin		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Guillemot		√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Kittiwake		Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Great skua		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic tern		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Shag		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Red-throated diver		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Leach's storm petrel		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar		Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
- √b This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
- √c These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix [6465](#)

Matrix [6566](#): Fetlar SPA

Name of designated site:		Fetlar SPA																			
Site Code:		UK9002031																			
Closest Distance to Project		777.5 km to array / 793.4 km to ECC / 754.7 km to ANS / 798.6 km to biogenic reef / 805.8 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones						Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects		
	Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D		
Great skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Arctic tern	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Red-necked phalarope	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Dunlin	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Whimbrel	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site. This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.

End of Matrix [6566](#)

Matrix ~~6667~~: Hermaness, Saxa Vord and Valla Field SPA

Name of designated site:		Hermaness, Saxa Vord and Valla Field SPA																			
Site Code:		UK9002011																			
Closest Distance to Project		798.8 km to array / 814.6 km to ECC / 775.7 km to ANS / 819.3 km to biogenic reef / 826.5 km to ORCP																			
Likely Effects of Project																					
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Great skua	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
European shag	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa
Red-throated diver	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Puffin	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Guillemot	√b	√b	√b	√b	√b	√b	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				√c	√c	√c
Kittiwake	Xa	Xa	Xa	Xa	Xa	Xa	Xa	√b	Xa	Xa	√b	Xa	Xa	√b	Xa				Xa	√c	Xa
Gannet	√b	√b	√b	√b	√b	√b	Xa	√b	Xa	Xa	√b	Xa	Xa	√b	Xa				√c	√c	√c
Fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

- Xa Site has connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on this distant SPA/ Ramsar after the likelihood and severity of effects on the SPA have been apportioned to all SPAs within the foraging range. The Project array is beyond the mean-maximum +1SD foraging ranges for all other designated seabird species (Woodward *et al.*, 2019) and therefore has no breeding season connectivity. We conclude negligible potential for impact on migratory birds from this SPA/ Ramsar passing through the site based on the distance from the site.
- √b This SPA is therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.
 These designated features are beyond mean-maximum +1SD foraging range (Bradbury *et al.*, 2014; Dierschke *et al.*, 2016). Therefore there is not potential for LSE during the breeding season. However, as the species BDMPS spans the colony and the Project, there is potential for connectivity in the non-breeding season(s).
- √c It is considered that where there is a potential for LSE alone, there is a potential for LSE in-combination.

End of Matrix ~~6667~~

Matrix [6768](#): Transboundary sites for Lesser black-backed gull (3 sites)

Name of designated site:		Duinen en Lage Land Texel; Waddenzee; and Duinen Vlieland																
Site Code:		Various																
Closest Distance to Project		Various >219 km to array																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Lesser black-backed gull	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa Sites have connectivity with breeding lesser black-backed gull based on mean-maximum +1SD foraging range, however the distance is at the extent of the foraging range and the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement (Bradbury *et al.*, 2014). It is therefore determined that significant effects would not manifest on these distant SPAs/ Ramsars after the likelihood and severity of effects on the SPAs have been apportioned to all SPAs within the foraging range. These SPAs are therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.

End of Matrix [6768](#)

Matrix ~~6869~~: Transboundary sites for Northern fulmar (9 sites)

Name of designated site:		Littoral seino-marin; Cap Sizun; Cote de Granit Rose-Sept Iles; Tregor Goëlo; Cap d'Erquy-Cap Fréhel; Camaret; Falaise du Bessin Occidental; Seevogelschutzgebiet Helgoland; and Ouessant-Molène																
Site Code:		Various																
Closest Distance to Project		Various >373 km to array																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Northern fulmar	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa Sites have connectivity with breeding fulmar based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014).
 It is therefore determined that significant effects would not manifest on these distant SPAs/ Ramsars after the likelihood and severity of effects on the SPAs have been apportioned to all SPAs within the foraging range.
 These SPAs are therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.

End of Matrix ~~6869~~

Matrix ~~6970~~: Transboundary sites for Manx shearwater (4 sites)

Name of designated site:		Cote de Granit Rose-Sept Iles; Iles Houat-Hoedic; Ouessant-Molène; and Baie de Morlaix.																
Site Code:		Various																
Closest Distance to Project		Various >581 km to array																
Likely Effects of Project																		
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of array infrastructure			Collisions for migratory waterbirds			Barrier effects for migratory waterbirds			Indirect impacts through effects on habitats and prey species			In combination effects				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Manx shearwater	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa				Xa	Xa	Xa

Evidence supporting conclusions

Xa Sites have connectivity with breeding Manx shearwater based on mean-maximum +1SD foraging range, however the significance of effects at a population level is considered to decrease exponentially with distance. Due to the large foraging range for this species, the likelihood and or severity of the effect experienced locally is considered negligible. In addition, this species has very low vulnerability to displacement and collision (Bradbury *et al.*, 2014).
 It is therefore determined that significant effects would not manifest on these distant SPAs/ Ramsars after the likelihood and severity of effects on the SPAs have been apportioned to all SPAs within the foraging range.
 These SPAs are therefore not considered relevant in the context of the HRA and LSE can be discounted in relation to all effects alone.

End of Matrix ~~6970~~

3.4 Sites designated with Migratory Fish Features

Matrix ~~7071~~: Humber Estuary SAC

Name of designated site: Humber Estuary SAC																														
Site Code: UK0030170																														
Closest Distance to Project: 54.4 km to array / 18.5 km to ECC / 47.5 km to ANS / 23.8 km to biogenic reef / 19.7 to ORCP																														
Likely Effects of Project																														
Effect	Underwater noise			Suspended sediment / deposition			Indirect pollution			Accidental pollution			EMF			INNS			Physical habitat loss / disturbance			Changes to prey			In-combination effects					
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Sea lamprey	√a	Xb	√a	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb
River lamprey	√a	Xb	√a	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb

Evidence supporting conclusions

- √a The range between the array areas and designated site mean that there is a potential for LSE for this species at this site.
- Xb No potential for LSE. These features have been screened out from assessment as a result of the distance between the Project and the designated site and the nature of effect.

End of Matrix ~~7071~~

3.5 Sites Designated with Onshore Ecology Features

Matrix ~~7172~~: Humber Estuary SPA

Name of designated site:		Humber Estuary SPA										
Site Code:		UK9006111										
Closest Distance to Project		54.0 km to array / 12.5 km to ECC / 15.3 km to ANS / 47.5 km to biogenic reef / 18.2 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats			Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
	C	O	D	C	O	D	C	O	D	C	O	D
Stage of Development												
Great bittern				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Common shelduck				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Eurasian marsh harrier				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Hen harrier				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Pied avocet				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
European golden plover				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Red knot				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Dunlin				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Ruff				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Black-tailed godwit				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Bar-tailed godwit				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Common redshank				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Little tern				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Waterbird assemblage				√a	√a	√a	√a	Xb	Xb	√a	Xb	√a

Evidence supporting conclusions

- √a Risk of disturbance, and of loss of foraging, roosting and nesting habitat for birds outside the SPA only based on ranges of the ornithological features.
- Xb No potential for LSE. These features have been screened out from assessment as a result of the distance between the Project and the designated site and the nature of the works and activities in these different phases.

End of Matrix ~~7172~~

Matrix ~~7273~~: Humber Estuary Ramsar Site

Name of designated site: Humber Estuary Ramsar Site
 Site Code: UK11031 (663)
 Closest Distance to Project: 54.0 km to array / 12.5 km to ECC / 15.3 km to ANS / 47.5 km to biogenic reef / 18.2 km to ORCP
 Likely Effects of Project

Effect	Risk of loss of or damage to habitats			Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
	C	O	D	C	O	D	C	O	D	C	O	D
Stage of Development												
Criterion 1- dune systems and humid dune slacks;	Xb	Xb	Xb				Xb	Xb	Xb	Xb	Xb	Xb
Criterion 5 – assemblages of international importance (waterfowl, non-breeding season);	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Criterion 6 – species/populations occurring at levels of international importance	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Common shelduck	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Eurasian golden plover	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Red knot	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Dunlin	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Black-tailed godwit	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Bar-tailed godwit	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a
Common redshank	√a	√a	Xb	√a	√a	√a	√a	Xb	Xb	√a	Xb	√a

Evidence supporting conclusions

√a Potential for LSE due to disturbance, and loss of foraging and roosting habitat. This is limited to birds and habitats outside of the RAMSAR. Due to the mobile nature of the birds, the ornithological features are considered to have potential for LSE.

√b No potential for LSE. These features have been screened out from assessment as a result of the distance between the Project and the designated site and the nature of the works and activities in these different phases.

End of Matrix ~~7273~~

Matrix [7374](#): Humber Estuary SAC

Name of designated site:		Humber Estuary SAC											
Site Code:		UK0030170											
Closest Distance to Project		54.4 km to array / 18.9 km to ECC / 19.7 km to ANS / 47.5 km to biogenic reef / 23.8 km to ORCP											
Likely Effects of Project													
Effect	Risk of loss of or damage to habitats	Risk of disturbance			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution					
		C	O	D	C	O	D	C	O	D			
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D
Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks		Xa	Xa	Xa							Xa	Xa	Xa
Estuaries		Xa	Xa	Xa							Xa	Xa	Xa
Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats		Xa	Xa	Xa							Xa	Xa	Xa
Coastal lagoons		Xa	Xa	Xa							Xa	Xa	Xa
Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand		Xa	Xa	Xa							Xa	Xa	Xa
Atlantic salt meadows		Xa	Xa	Xa							Xa	Xa	Xa
Embryonic shifting dunes		Xa	Xa	Xa							Xa	Xa	Xa
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)		Xa	Xa	Xa							Xa	Xa	Xa
Shifting dunes with marram		Xa	Xa	Xa							Xa	Xa	Xa
Fixed dunes with herbaceous vegetation (grey dunes)		Xa	Xa	Xa							Xa	Xa	Xa
Dune grassland		Xa	Xa	Xa							Xa	Xa	Xa
Dunes with <i>Hippophae rhamnoides</i> ; Dunes with sea-buckthorn		Xa	Xa	Xa							Xa	Xa	Xa

Evidence supporting conclusions

Xa Due to the distance between the Order Limits and the SAC, and the nature of the habitats, there is no risk of undermining the conservation objectives for this SAC.

End of Matrix [7374](#)

Matrix [7475](#): Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC

Name of designated site:		Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC											
Site Code:		UK0030270											
Closest Distance to Project		54.4 km to array / 11.9 km to ECC / 15.5 km to ANS / 51.5 km to biogenic reef / 1.6 km to ORCP											
Likely Effects of Project													
Effect		Risk of loss of or damage to habitats			Risk of disturbance			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D
Embryonic shifting dunes		√a	√a	√a	√a		√a				√a	√a	√a
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")		√a	√a	√a	√a		√a				√a	√a	√a
Fixed coastal dunes with herbaceous vegetation ("grey dunes")		√a	√a	√a	√a		√a				√a	√a	√a
Dunes with <i>Hippophae rhamnoides</i>		√a	√a	√a	√a		√a				√a	√a	√a
Humid dune slacks		√a	√a	√a	√a		√a				√a	√a	√a

Evidence supporting conclusions

√a Risk of loss of or damage to Annex I habitats depending on location of the above ground infrastructure. Potential for LSE on all qualifying features. This is a precautionary conclusion based on project design uncertainties.

End of Matrix [7475](#)

Matrix 7576: The Wash SPA

Name of designated site:	The Wash SPA
Site Code:	UK9008021
Closest Distance to Project	66.3 km to array / 16.5 km to ECC / 22.7 km to ANS / 74.0 km to biogenic reef / 3.8 km to ORCP
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats			Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
	C	O	D	C	O	D	C	O	D	C	O	D
Stage of Development												
Bewick's swan				√a	√a	√a	√a			√a		√a
Pink-footed goose				√a	√a	√a	√a			√a		√a
Dark-bellied brent goose				√a	√a	√a	√a			√a		√a
Common shelduck				√a	√a	√a	√a			√a		√a
Eurasian wigeon				√a	√a	√a	√a			√a		√a
Gadwall				√a	√a	√a	√a			√a		√a
Northern pintail				√a	√a	√a	√a			√a		√a
Black (common) scoter				√a	√a	√a	√a			√a		√a
Common goldeneye				√a	√a	√a	√a			√a		√a
Eurasian oystercatcher				√a	√a	√a	√a			√a		√a
Grey plover				√a	√a	√a	√a			√a		√a
Red knot				√a	√a	√a	√a			√a		√a
Sanderling				√a	√a	√a	√a			√a		√a
Dunlin				√a	√a	√a	√a			√a		√a
Black-tailed godwit				√a	√a	√a	√a			√a		√a
Bar-tailed godwit				√a	√a	√a	√a			√a		√a
Eurasian curlew				√a	√a	√a	√a			√a		√a
Common redshank				√a	√a	√a	√a			√a		√a
Ruddy turnstone				√a	√a	√a	√a			√a		√a
Common tern				√a	√a	√a	√a			√a		√a
Little tern				√a	√a	√a	√a			√a		√a
Waterbird assemblage				√a	√a	√a	√a			√a		√a

Evidence supporting conclusions

√a Risk of disturbance and loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure and Risk of pollution. Potential for LSE on all qualifying features.

End of Matrix [7576](#)

Matrix ~~7677~~: The Wash RAMSAR site

Name of designated site:		The Wash RAMSAR Site										
Site Code:		UK11072 (395)										
Closest Distance to Project		66.2 km to array / 16.5 km to ECC / 22.7 km to ANS / 74.0 km to biogenic reef / 3.8 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats	Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Criterion 1 – Saltmarshes, major intertidal banks of sand and mud, shallow water, and deep channels	√a			√a	√a	√a	√a			√a		√a
Criterion 3 – Inter-relationship between saltmarshes, intertidal sand, mudflats, and estuarine waters	√a			√a	√a	√a	√a			√a		√a
Criterion 5 – Bird assemblages of international importance				√a	√a	√a	√a			√a		√a
Criterion 6 – Bird species/ populations occurring at levels of international importance				√a	√a	√a	√a			√a		√a
Common redshank				√a	√a	√a	√a			√a		√a
Eurasian curlew				√a	√a	√a	√a			√a		√a
Eurasian oystercatcher				√a	√a	√a	√a			√a		√a
Grey plover				√a	√a	√a	√a			√a		√a
Red knot				√a	√a	√a	√a			√a		√a
Sanderling				√a	√a	√a	√a			√a		√a
Black-headed gull				√a	√a	√a	√a			√a		√a
Common eider				√a	√a	√a	√a			√a		√a
Bar-tailed godwit				√a	√a	√a	√a			√a		√a
Common shelduck				√a	√a	√a	√a			√a		√a
Dark-bellied brent goose				√a	√a	√a	√a			√a		√a
Dunlin				√a	√a	√a	√a			√a		√a
Pink-footed goose				√a	√a	√a	√a			√a		√a

Evidence supporting conclusions

√a Risk of loss of or damage to estuary habitats. Risk of disturbance and loss of foraging and roosting habitat inside and outside the Ramsar site, depending on location of the above ground infrastructure.
 Risk of pollution. Potential for LSE on all qualifying features.

End of Matrix ~~7677~~

Matrix [7778](#): The Wash & North Norfolk Coast SAC

Name of designated site:		The Wash & North Norfolk Coast SAC														
Site Code:		UK0017075														
Closest Distance to Project		47.8 km to array / 13.4 km to ECC / 19.3 km to ANS / 50.4 km to biogenic reef / 0.0 km to ORCP														
Likely Effects of Project																
Effect		Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution			Displacement of otter and reduction of otter habitat		
Stage of Development		C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Atlantic salt meadows		√a	√a	√a	√a		√a									
Mediterranean and thermo-Atlantic halophilous scrubs		√a	√a	√a	√a		√a									
Coastal lagoons		√a	√a	√a	√a		√a									
Otter					√a	√a	√a							√a		√a

Evidence supporting conclusions

√a Risk of loss of or damage to Annex I habitats depending on location of the above ground infrastructure. Displacement of otter and reduction of otter habitat. Potential for LSE on all qualifying features. This is a precautionary conclusion based on project design uncertainties.

End of Matrix [7778](#)

Matrix [7879](#): Greater Wash SPA

Name of designated site:		Greater Wash SPA										
Site Code:		UK9020329										
Closest Distance to Project		24.6 km to array / 0.0 km to ECC / 0.0 km to ANS / 24.0 km to biogenic reef / 0.0 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk disturbance/displacement of			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Sandwich tern	√a			√a	√a	√a	√a			√a		√a
Common tern	√a			√a	√a	√a	√a			√a		√a
Little tern	√a			√a	√a	√a	√a			√a		√a

Evidence supporting conclusions

√a Risk of disturbance of nesting birds inside the SPA and loss of foraging habitat outside the SPA, depending on location of the above ground infrastructure; and Risk of pollution. Potential for LSE on all qualifying features.

End of Matrix [7879](#)

Matrix ~~7980~~: Gibraltar Point SPA

Name of designated site:		Gibraltar Point SPA										
Site Code:		UK9008022										
Closest Distance to Project		62.9 km to array / 13.4 km to ECC / 19.3 km to ANS / 70.5 km to biogenic reef / 1.6 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats, reduction of habitat quality.	Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Grey plover				√a	√a	√a	√a			√a		√a
Sanderling				√a	√a	√a	√a			√a		√a
Bar-tailed godwit				√a	√a	√a	√a			√a		√a
Little tern				√a	√a	√a	√a			√a		√a

Evidence supporting conclusions

√a Risk of disturbance, and of loss of foraging, roosting and nesting habitat outside the SPA depending on location of the above ground infrastructure. Risk of pollution. Potential for LSE on all qualifying features.

End of Matrix ~~7980~~

Matrix ~~8081~~: Gibraltar Point RAMSAR

Name of designated site:		Gibraltar Point Ramsar Site										
Site Code:		UK11027 (589)										
Closest Distance to Project		62.8 km to array / 13.4 km to ECC / 19.3 km to ANS / 70.5 km to biogenic reef / 1.6 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats, reduction of habitat quality.	Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure, Loss of or decline in populations of scarce invertebrates and plants			Risk of pollution				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar Criterion 1: Coastal habitats – estuarine mudflats, sandbanks, and saltmarsh	√a		√a	√a	√a	√a				√a		√a
Ramsar Criterion 2: Red Data book invertebrates				√a	√a	√a	√a			√a		√a
Notable plant species				√a	√a	√a	√a			√a		√a
Ramsar Criterion 5: Waterfowl				√a	√a	√a	√a			√a		√a
Ramsar Criterion 6: Grey plover, sanderling, bar-tailed godwit, dark-bellied brent goose				√a	√a	√a	√a			√a		√a

Evidence supporting conclusions

√a Risk of pollution, affecting aquatic invertebrates, plants and birds. Risk of disturbance and loss of foraging and roosting habitat outside the Ramsar site for dark-bellied brent goose. Potential for LSE on some coastal habitats, waterfowl, invertebrates and plants.

End of Matrix ~~8081~~

Matrix [8182](#): North Norfolk SPA

Name of designated site:		North Norfolk SPA										
Site Code:		UK9009031										
Closest Distance to Project		56.4 km to array / 29.9km to ECC / 31.4 km to ANS / 59.0 km to biogenic reef / 10.8 km to ORCP										
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats, reduction of habitat quality.	Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure.			Risk of pollution				
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Pink-footed goose				√a	√a	√a	√a					

Evidence supporting conclusions

√a Risk of disturbance and loss of foraging and roosting habitat outside the SPA. Potential for LSE on pink-footed goose.

End of Matrix [8182](#)

Matrix [8283](#): North Norfolk RAMSAR

Name of North Norfolk RAMSAR designated site:												
Site Code: 76												
Closest Distance 56.4 km to array / 29.9 km to ECC / 31.3 km to ANS / 59.0 km to biogenic reef / 10.8 km to ORCP to Project												
Likely Effects of Project												
Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance/ displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure.			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Pink-footed goose				√a	√a	√a	√a					

Evidence supporting conclusions

√a Risk of disturbance and loss of foraging and roosting habitat outside the SPA. Potential for LSE on pink-footed goose.

End of Matrix [8283](#)